

MASUD M, **SADIQ M. SAIT**

UNIVERSAL AHPL-A LANGUAGE FOR VLSI DESIGN AUTOMATION

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Abstract

UAHPL (Universal Hardware Programming Language) is an extension of AHPL (A Hardware Programming Language). It is a register transfer language, which allows one to specify many low-level details for efficient implementation of digital systems in MOS technology. Large iterative circuits, such as arithmetic logic units (ALUs), can be expressed conveniently in an Algol-like notation. The language has been implemented by means of a multistage compiler, which supports a wide spectrum of design activities including testing. The paper discusses the salient features of the language and translates the UAHPL description into n-MOS layouts.

Keywords

Very Large Scale Integration, metal oxide semiconductors, computer aided design, programming languages, UAHPL (Universal Hardware Programming Language), specifications